**Matter Study Guide**

**Atoms, Molecules, Elements, Compounds:**

1. **What is an atom?**
2. **Draw an atom.**
3. **What is a molecule?**
4. **Draw a molecule.**
5. **What is an element?**
6. **Draw an element.**
7. **What is a compound?**
8. **Draw a compound.**
9. **Is H2O (H-H-O) an atom, molecule, element, compound? Circle all that are true.**
10. **Is O2 (O-O) an atom, molecule, element, compound? Circle all that are true.**
11. **Is NaCl (Na-Cl) an atom, molecule, element, compound? Circle all that are true.**

**Periodic Table:**

1. **List and Explain 4 ways the periodic table is organized.**
2. **Do groups run up and down, or side to side on the periodic table?**
3. **Do periods run up and down, or side to side on the periodic table?**

**Chemical Reactions:**

1. **What is a chemical reaction?**
2. **Explain the difference between reactants and products?**
3. **In the chemical equation Na +Cl → NaCl, list the reactant(s).**
4. **In the chemical equation H2 + O → H2O, list the product(s).**
5. **Na + Cl → NaCl. Explain what is happening.**

**(Hint: What word(s) describe the arrow?)**

**Don’t Forget!**

1. **ALL matter is *made of* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**